

EXHIBIT 10

EXHIBIT E

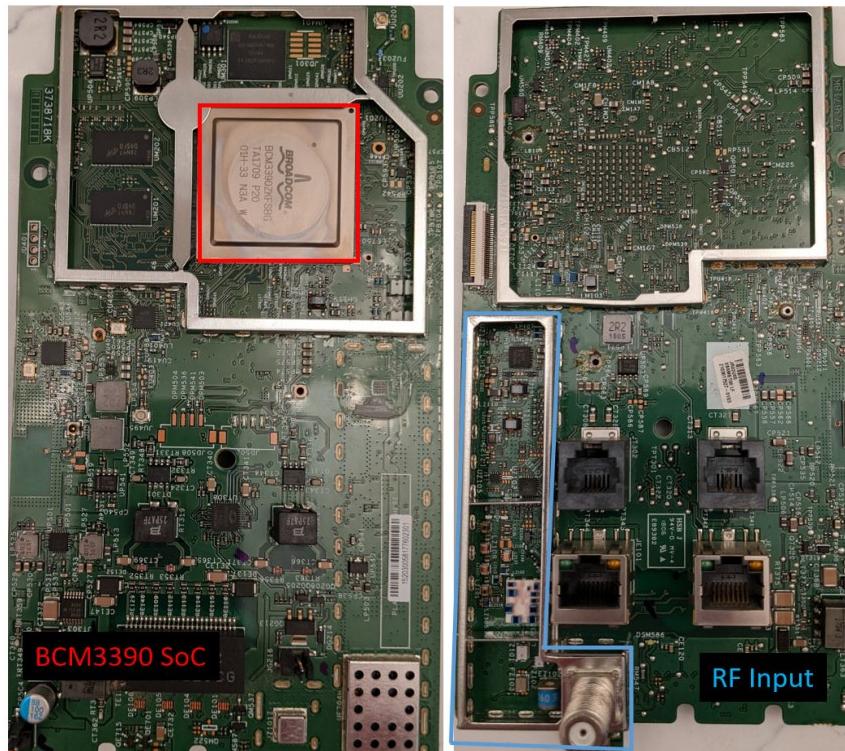
U.S. Patent No. 9,825,826 (the “826 Patent”) Exemplary Infringement Chart

Comcast operates and maintains a nationwide television and data network through which it sells, leases, and offers for sale products and services, including the Technicolor TC8717 cable modem, Technicolor CGM4140 cable modem, Technicolor CGM4331 cable modem, and products that operate in a similar manner (“Accused Cable Modem Products”), as well as the Arris AX013ANC STB, Arris AX013ANM STB, Arris AX014ANC STB, Arris AX014ANM STB, Arris MX011ANC STB, Arris MX011ANM STB, Pace PX013ANC STB, Pace PX013ANM STB, Pace PX022ANC STB, Pace PX022ANM STB, Samsung SX022ANC STB, Samsung SX022ANM STB, and products that operate in a similar manner (“Accused Set Top Products”). Comcast provides cable television and internet services (“Accused Services”) via the lease, sale, and/or distribution of the Accused Cable Modem Products and/or the Accused Set Top Products. Comcast literally and/or under the doctrine of equivalents infringes the claims of the ’826 Patent by making, using, selling, offering for sale, and/or importing the Accused Services, Accused Cable Modem Products, and/or the Accused Set Top Products.

As shown below in the chart with exemplary support, the Accused Services infringe at least claims 1 - 4, 6, 8, and 9 of U.S. Patent No. 9,825,826 (“826 Patent”). The ’826 Patent was filed November 23, 2015, issued November 21, 2017, and is entitled “Method and Apparatus for Spectrum Monitoring.” The ’826 Patent claims priority to U.S. Patent Application Serial No. 14/341,880 filed on Jul. 28, 2014; U.S. Patent Application Serial No. 13/607,916 filed on Sep. 10, 2012; and U.S. Provisional Patent Application No. 61/532,098 filed on Sep. 8, 2011. The ’826 Patent is entitled to a priority date of at least as early as February 25, 2011.

The Accused Set Top Products and the Accused Cable Modem Products infringe the claims of the ’826 Patent, as described below, either directly under 35 U.S.C. § 271(a), or indirectly under 35 U.S.C. §§ 271(b)–(c).

#	U.S. Patent No. 9,825,826	Accused Products and Services
1pre	A method comprising:	<p>The Accused Services perform the claimed method utilizing, for example, the Accused Set Top Products, which include at least one set top box (“STB”) located at each subscriber location, including, for example, the Arris AX013ANC STB, Arris AX013ANM STB, Arris AX014ANC STB, Arris AX014ANM STB, Arris MX011ANC STB, Arris MX011ANM STB, Pace PX013ANC STB, Pace PX013ANM STB, Pace PX022ANC STB, Pace PX022ANM STB, Samsung SX022ANC STB, Samsung SX022ANM STB, and products that operate in a similar manner, and/or the Accused Cable Modem Products, including, for example, the Technicolor TC8717 cable modem, Technicolor CGM4140 cable modem, Technicolor CGM4331 cable modem, and products that operate in a similar manner, located at each subscriber location.</p> <p>By way of example, the Technicolor CGM4140 cable modem is charted herein. As described below, the Technicolor CGM4140 has a Broadcom BCM3390 SoC. On informed belief, all cable modems deployed by or enabled by Comcast that contain the BCM3383, BCM3384, and BCM33843 series chips operate substantially the same as the BCM3390 series chips for purposes of the '826 Patent. As there are no functional differences between the BCM33843 SoC and BCM3390 SoC that impacts infringement of the '826 Patent, documents describing the operation of the BCM33843 SoC equally describe the operation of the BCM3390 SoC.</p> <p>Therefore, the Technicolor CGM4140 is representative of all Accused Set Top Products and Accused Cable Modem Products, including those having BCM3383, BCM3384, BCM33843, or BCM3390 SoCs.</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>

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1a	performing by one or more circuits of a receiver coupled to a television and data service provider headend via a hybrid fiber coaxial (HFC) network:	<p>The Accused Set Top Products and the Accused Cable Modem Products include one or more circuits of a receiver coupled to a television and data service provider headend via a hybrid fiber coaxial (HFC) network, that perform the claimed steps as described below.</p> <p>Specifically, the Technicolor CGM4140 has applicable circuitry and/or software modules constituting an analog to digital converter. For example, the Technicolor CGM4140 has a Broadcom BCM3390 SoC, highlighted in red below. The Technicolor CGM4140 has at least one RF connector, highlighted in blue, that couples to a television and data service provider headend via HFC network owned and/or operated by Comcast.</p> 

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1b	receiving, via said HFC network, a signal that carries a plurality of channels, wherein said channels comprise one or both of television channels and data channels;	<p>The Accused Set Top Products and the Accused Cable Modem Products receive, via said HFC network, a signal that carries a plurality of channels, wherein said channels comprise one or both of television channels and data channels as described below.</p> <p>The Technicolor CGM4140 receives the entire ~1GHz downstream spectrum of the Comcast cable plant. The 1 GHz cable spectrum includes a plurality of data channels and a plurality of television channels. On informed belief, the plurality of channels includes television channels and data channels.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSISTM 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom's new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843”</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002036)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.”</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the</p>

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		claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.
1c	digitizing said received signal to generate a digitized signal;	<p>The Accused Set Top Products and the Accused Cable Modem Products digitize said received signal to generate a digitized signal as described below.</p> <p>The Technicolor CGM4140 includes applicable circuitry and/or software modules providing an analog to digital converter, for example a Broadcom BCM3390 SoC. The Technicolor CGM4140 receives the entire ~1GHz downstream spectrum of a Comcast cable plant. The Technicolor CGM4140, using its applicable circuitry and/or software modules, digitizes the received signal to generate a digitized signal.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom's new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843”</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002036)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.”</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>

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1d	selecting a first portion of said digitized signal;	<p>The Accused Set Top Products and the Accused Cable Modem Products select a first portion of said digitized signal as described below.</p> <p>Specifically, the Technicolor CGM4140 has applicable circuitry and/or software modules providing advanced signal processing techniques that can be used to digitally select multiple channels simultaneously, including selecting a first portion of said digitized signal. For example, the Technicolor CGM4140 selects the first portion of the digitized signal and provides the first portion to circuitry operable to analyze the characteristics of the signal. For example, applicable circuitry and/or software modules of the BCM3390 SoC provides a spectrum analyzer function that provides spectrum analysis for an entire digitized signal. The Technicolor CGM4140 can be configured to determine characteristics of the digitized signal. The selected first portion of the signal can be used for remote performance monitoring and diagnostics using a remote system operated by Comcast. See elements 1g-h.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSIS™ 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom's new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843”</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002036)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.”</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p>

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		<p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
1e	selecting a second portion of said digitized signal;	<p>The Accused Set Top Products and the Accused Cable Modem Products select a second portion of said digitized signal as described below.</p> <p>Specifically, the Technicolor CGM4140 has applicable circuitry and/or software modules providing advanced signal processing techniques that can be used to digitally select multiple channels simultaneously, including selecting a second portion of said digitized signal. For example, the Technicolor CGM4140, using at least in part applicable circuitry and/or software modules located in the BCM3390 SoC, is operable to process the selected second portion of the digitized signal to recover information carried in the plurality of channels. For example, the Technicolor CGM4140 selects the second portion of the digitized signal and provides the second portion to applicable circuitry and/or software modules operable to recover content. See element 1f.</p> <p>“The new BCM3384 DOCSIS®/Euro-DOCSISTM 3.0 cable gateway SoC combines Broadcom's Full-Band Capture (FBC) digital tuning technology with remote diagnostics, dual-band concurrent Wi-Fi, a custom, dedicated applications processor and integrated DECT 6.0 CAT-iq 2.0. ... Broadcom's new BCM33843 is pin compatible ... Broadcom is now sampling [as of Jan 08, 2031] the BCM3384 and BCM33843”</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002036)</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.”</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p>

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1f	processing said selected second portion of said digitized signal to recover information carried in said plurality of channels;	<p>The Accused Set Top Products and the Accused Cable Modem Products process said selected second portion of said digitized signal to recover information carried in said plurality of channels as described below.</p> <p>Specifically, the Technicolor CGM4140 includes applicable circuitry and/or software modules operable to process said selected second portion of said digitized signal to recover information carried in said plurality of channels. For example, the Technicolor CGM4140 can process one or more channel(s) to recover data carried on those channel(s), such as the second selected portion of the digitized signal.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
1g	analyzing said selected first portion of said digitized signal to measure a	The Accused Set Top Products and the Accused Cable Modem Products analyze said selected first portion of said digitized signal to measure a characteristic of said received signal as described below.

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	characteristic of said received signal; and	<p>The Technicolor CGM4140 includes applicable circuitry and/or software modules operable as a signal analyzer. This includes diagnostic features such as spectrum analysis for the entire input band. On informed belief, the Technicolor CGM4140 can analyze the digitized signal as a single band or in segments. When the digitized signal is analyzed in segments, applicable circuitry and/or software modules of the Technicolor CGM4140 analyze a sequence of segments of the entire digitized signal and the individual analysis segments are combined to monitor the entire digitized signal. On informed belief, the Technicolor CGM4140 determines characteristics of the digitized signal, such as signal strength and/or signal power vs. frequency.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
1h	controlling the transmission of network management messages back to said headend based on said measured characteristic of said received signal, wherein said measured characteristic is different than said network management messages.	<p>The Accused Set Top Products and the Accused Cable Modem Products control the transmission of network management messages back to said headend based on said measured characteristic of said received signal, wherein said measured characteristic is different than said network management messages as described below.</p> <p>Specifically, the Technicolor CGM4140, using its applicable circuitry and/or software modules, is operable to control the transmission of network management messages based on the measured characteristics. The Technicolor CGM4140 sends the network management messages to servers and/or systems provided by and/or operated by Comcast. For example, the Technicolor CGM4140 provides</p>

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		<p>information to a PNM system operated by Comcast. This allows the received signals to be analyzed at a customer's premises (e.g., where the Technicolor CGM4140 is located) and the received signals can be remotely analyzed without driving to the customer's premises or accessing the in-home wiring.</p> <p>"Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels."</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p> <p>"Wideband spectrum analysis has been demonstrated widely in the field as a very useful PNM tool which provides for a spectrum analyzer capability in CMs at as many locations as possible in the plant. Full-band capture in silicon permits the display to encompass the entire downstream spectrum. Figure 4 shows a spectrum of the received downstream signal at a CM. In this case, we observe fluctuations across the band in carrier amplitude, including a group of bonded carriers around 630 MHz with higher power than their neighbors. We see vacancies in the spectrum, and locations where unmodulated analog video carriers are used as pilots. The overall slope of the spectrum is generally flat; no major up-slope or downslope is seen and no appreciable ripple. We see a notch around 720 MHz indicating a power "suckout" that would cause a service outage on those channels. These determinations may be automated by software algorithms to analyze the spectral information. Clearly this plant requires maintenance, even if no call has yet been received from a customer."</p> <p>(ENTROPIC_COMCAST_002938 at ENTROPIC_COMCAST_002944)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>

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2	2. The method of claim 1, wherein said network management messages indicate whether a parameter is outside of acceptable bounds.	<p>The network management messages indicate whether a parameter is outside of acceptable bounds as described below.</p> <p>The Technicolor CGM4140, using its applicable circuitry and/or software modules, performs diagnostics and spectrum analysis of the received signal. The diagnostics and spectrum analysis includes measuring characteristics indicating whether a parameter is outside of acceptable bounds. The network management message generated based on this measured characteristic therefore indicates whether a parameter is outside of acceptable bounds.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p> <p>“Wideband spectrum analysis has been demonstrated widely in the field as a very useful PNM tool which provides for a spectrum analyzer capability in CMs at as many locations as possible in the plant. Full-band capture in silicon permits the display to encompass the entire downstream spectrum. Figure 4 shows a spectrum of the received downstream signal at a CM. In this case, we observe fluctuations across the band in carrier amplitude, including a group of bonded carriers around 630 MHz with higher power than their neighbors. We see vacancies in the spectrum, and locations where unmodulated analog video carriers are used as pilots. The overall slope of the spectrum is generally flat; no major up-slope or downslope is seen and no appreciable ripple. We see a notch around 720 MHz indicating a power “suckout” that would cause a service outage on those channels. These determinations may be automated by software algorithms to analyze the spectral information. Clearly this plant requires maintenance, even if no call has yet been received from a customer.” (ENTROPIC_COMCAST_002938 at ENTROPIC_COMCAST_002944)</p>

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		<p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
3	3. The method of claim 2, wherein said parameter is a modulation parameter of said received signal.	<p>Said parameter is a modulation parameter of said received signal as described below.</p> <p>The Technicolor CGM4140, using its applicable circuitry and/or software modules, performs diagnostics and spectrum analysis of the received signal. The diagnostics and spectrum analysis includes measuring characteristics indicating whether a parameter is outside of acceptable bounds. The network management message generated based on this measured characteristic therefore indicates whether a parameter is outside of acceptable bounds. On informed belief, this includes a modulation parameter of the received signal.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p> <p>“Wideband spectrum analysis has been demonstrated widely in the field as a very useful PNM tool which provides for a spectrum analyzer capability in CMs at as many locations as possible in the plant. Full-band capture in silicon permits the display to encompass the entire downstream spectrum. Figure 4 shows a spectrum of the received downstream signal at a CM. In this case, we observe fluctuations across the band in carrier amplitude, including a group of bonded carriers around 630 MHz with higher power than their neighbors. We see vacancies in the spectrum, and locations where unmodulated analog video carriers are used as pilots. The overall slope of the spectrum is generally flat; no major up-slope or downslope is seen and no appreciable ripple. We see a notch around 720 MHz indicating</p>

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		<p>a power “suckout” that would cause a service outage on those channels. These determinations may be automated by software algorithms to analyze the spectral information. Clearly this plant requires maintenance, even if no call has yet been received from a customer.”</p> <p>(ENTROPIC_COMCAST_002938 at ENTROPIC_COMCAST_002944)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
4	4. The method of claim 2, wherein said parameter is a transmit power of said received signal.	<p>Said parameter is a transmit power of said received signal as described below.</p> <p>The Technicolor CGM4140, using its applicable circuitry and/or software modules, performs diagnostics and spectrum analysis of the received signal. The diagnostics and spectrum analysis includes measuring characteristics indicating whether a parameter is outside of acceptable bounds. The network management message generated based on this measured characteristic therefore indicates whether a parameter is outside of acceptable bounds. On informed belief, this includes a transmit power of the received signal.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.”</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p> <p>“Wideband spectrum analysis has been demonstrated widely in the field as a very useful PNM tool which provides for a spectrum analyzer capability in CMs at as many locations as possible in the plant. Full-band capture in silicon permits the display to encompass the entire downstream spectrum. Figure</p>

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		<p>4 shows a spectrum of the received downstream signal at a CM. In this case, we observe fluctuations across the band in carrier amplitude, including a group of bonded carriers around 630 MHz with higher power than their neighbors. We see vacancies in the spectrum, and locations where unmodulated analog video carriers are used as pilots. The overall slope of the spectrum is generally flat; no major up-slope or downslope is seen and no appreciable ripple. We see a notch around 720 MHz indicating a power “suckout” that would cause a service outage on those channels. These determinations may be automated by software algorithms to analyze the spectral information. Clearly this plant requires maintenance, even if no call has yet been received from a customer.”</p> <p>(ENTROPIC_COMCAST_002938 at ENTROPIC_COMCAST_002944)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
6	6. The method of claim 1, wherein said characteristic is signal power vs. frequency.	<p>Said characteristic is signal power vs. frequency as described below.</p> <p>The Technicolor CGM4140, using its applicable circuitry and/or software modules, performs diagnostics and spectrum analysis of the received signal. On informed belief, the diagnostics and spectrum analysis includes measuring characteristics including signal power vs. frequency.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.”</p> <p>(ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p>

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		<p>“Wideband spectrum analysis has been demonstrated widely in the field as a very useful PNM tool which provides for a spectrum analyzer capability in CMs at as many locations as possible in the plant. Full-band capture in silicon permits the display to encompass the entire downstream spectrum. Figure 4 shows a spectrum of the received downstream signal at a CM. In this case, we observe fluctuations across the band in carrier amplitude, including a group of bonded carriers around 630 MHz with higher power than their neighbors. We see vacancies in the spectrum, and locations where unmodulated analog video carriers are used as pilots. The overall slope of the spectrum is generally flat; no major up-slope or downslope is seen and no appreciable ripple. We see a notch around 720 MHz indicating a power “suckout” that would cause a service outage on those channels. These determinations may be automated by software algorithms to analyze the spectral information. Clearly this plant requires maintenance, even if no call has yet been received from a customer.”</p> <p>(ENTROPIC_COMCAST_002938 at ENTROPIC_COMCAST_002944)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
8	8. The method of claim 1, wherein said characteristic is one of: signal-to-noise ratio, peak-to-average ratio, noise levels, bit error rate, and symbol error rate.	<p>Said characteristic is one of: signal-to-noise ratio, peak-to-average ratio, noise levels, bit error rate, and symbol error rate as described below.</p> <p>The Technicolor CGM4140, using its applicable circuitry and/or software modules, performs diagnostics and spectrum analysis of the received signal. On informed belief, the diagnostics and spectrum analysis includes measuring characteristics including signal-to-noise ratio, peak-to-average ratio, noise levels, bit error rate, and/or symbol error rate.</p> <p>“Full-Band Capture digital tuning technology and remote diagnostics: Integrated on-chip technology directly samples and digitizes the entire 1GHz downstream spectrum of a cable plant, providing access</p>

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		<p>to any channel anywhere. Remote diagnostics provides real time, unobtrusive diagnostic and spectrum analysis capabilities, without effecting user service on any of the 24 downstream channels.” (ENTROPIC_COMCAST_002035 at ENTROPIC_COMCAST_002037)</p> <p>“Wideband spectrum analysis has been demonstrated widely in the field as a very useful PNM tool which provides for a spectrum analyzer capability in CMs at as many locations as possible in the plant. Full-band capture in silicon permits the display to encompass the entire downstream spectrum. Figure 4 shows a spectrum of the received downstream signal at a CM. In this case, we observe fluctuations across the band in carrier amplitude, including a group of bonded carriers around 630 MHz with higher power than their neighbors. We see vacancies in the spectrum, and locations where unmodulated analog video carriers are used as pilots. The overall slope of the spectrum is generally flat; no major up-slope or downslope is seen and no appreciable ripple. We see a notch around 720 MHz indicating a power “suckout” that would cause a service outage on those channels. These determinations may be automated by software algorithms to analyze the spectral information. Clearly this plant requires maintenance, even if no call has yet been received from a customer.” (ENTROPIC_COMCAST_002938 at ENTROPIC_COMCAST_002944)</p> <p>Discovery will provide detailed information regarding implementation and identification of the specific components, source code, software and/or other instrumentalities used to implement the claimed method. As additional information is obtained through discovery related to the Accused Services and related instrumentalities, Entropic will supplement these contentions.</p>
	9. The method of claim 1, configuring, by said one or more circuits, a bandwidth and/or center frequency of said selected first portion of said digitized signal.	See 1g.